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Case Report

A case of acute discitis following spinal anesthesia: a rarity or a tip of the iceberg?

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Abstract

Background: Acute discitis, an inflammatory process of the intervertebral disc, has been reported as a rare complication of bacterial infection or chemical or mechanical irritation most commonly following spinal surgery. It may extend into the adjacent tissue and lead to grave orthopaedic and neurological consequences. Although it has been reported as an infective complication following spinal anesthesia also, its true incidence in our part of the world is not known. It may be higher than generally thought as the technique is overwhelmingly used. Further, we do not know about its awareness among anesthesia practitioners. Here we report a case of acute discitis in a young lady who presented with severe acute low back pain two weeks after spinal anesthesia for caesarean section; magnetic resonance imaging of lumbosacral spine revealed infective spondylodiscitis and she was treated with antibiotics and analgesics. The true incidence of acute infective discitis following spinal anaesthesia in our part of the world is unknown and it may be higher than thought. It can be prevented by using rigorous aseptic techniques, and anesthesia should be administered by appropriately qualified and trained personnel.

Keywords: Acute discitis; low back pain; spinal anesthesia



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Introduction

Acute discitis is an uncommon but potentially disabling condition which usually follows invasive interventions of the spine.¹ Any patient presenting with acute back pain with the history of recent spinal anesthesia should not be taken lightly but must be thoroughly evaluated to rule out possibility of serious complications like acute infective discitis. Acute discitis responds well to treatment if diagnosed timely. All anesthesia care providers must be aware of this grave complication of spinal anesthesia. Enforcing safety standards and care by appropriately qualified personnel can be expected to decrease the incidence.

Case Report

A 22-year-old housewife from eastern Terai region of Nepal, presented in the emergency of a tertiary care university hospital of Nepal with complaint of severe low back pain for one day duration. The patient was apparently well until two weeks ago when she underwent caesarean section in a zonal hospital of Eastern Nepal under subarachnoid block. Details of the technique and drugs used for spinal anesthesia could not be known. As reported by the patient there was no complication during the anesthesia and surgical procedure and the surgery lasted for about one hour and a healthy male baby was delivered. The patient was asymptomatic for following two days and was discharged from the hospital. Then, during the following two weeks the patient was asymptomatic when she developed low back pain of sudden onset without any precipitating cause, aggravated by forward bending of the neck and radiated towards the knee. There was no history of lifting heavy objects, trauma, fever, or use of any illicit drugs. On examination the vitals were stable and the positive finding was that there was tenderness in the lumbar spine where the subarachnoid block was given. Supine leg raise test was normal bilaterally. The patient was afebrile, with no obvious erythema or swelling at the spinal puncture site. Bowel and bladder habits were normal. Neurological examination was normal. Diagnosis of simple post spinal backache was made and she received treatment with analgesics (tramadol), muscle relaxants (tizanidine), and alprazolam. Urine routine and blood (Haemoglobin, Total counts, Differential counts) investigation were normal. Ultrasonography revealed a normal scan. There was no improvement of her symptom even after two days of treatment in the hospital, so a magnetic resonance imaging (MRI) of lumbo-sacral spine was planned on the same day to find out the cause and at the same time rule out any sinister pathology. MRI of lumbosacral spine revealed infective spondylodiscitis of L2 and L3 vertebra and L2 and L3 intervertebral disc displaying enhancing marrow oedema with destruction and irregularity of end plate at L2–L3 level (Figure 1 and Figure 2) and, therefore diagnosis of acute infective discitis was confirmed and treatment was started accordingly. The Erythrocyte sedimentation rate was assessed in the

meantime which was 96mm/first hour which further supported the diagnosis of acute discitis. The patient received antibiotics inj vancomycin 1gm two times a day and flucloxacillin 500mg three times a day for two weeks. The patient was discharged from the hospital after becoming completely symptom free in two weeks time with the advice of continuing flucloxacillin for further 4 weeks. When the patient came for follow up after 6 weeks she was fit and fine without back pain or any other symptoms.

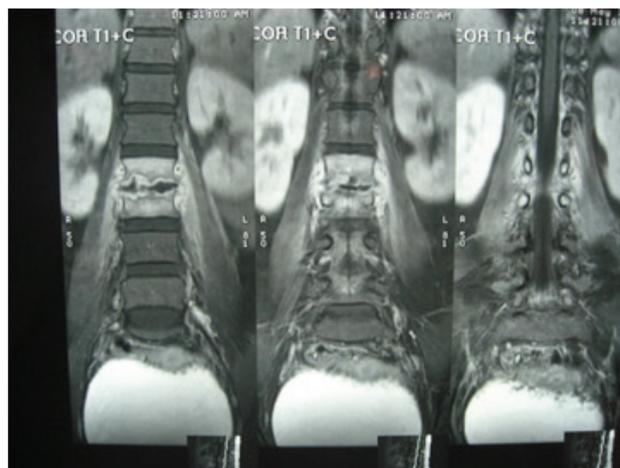


Figure 1: Infective spondylodiscitis of L2 and L3 vertebrae and L2, L3 disc showing enhanced marrow edema and destruction and irregularity of end plates at L2, L3 level.

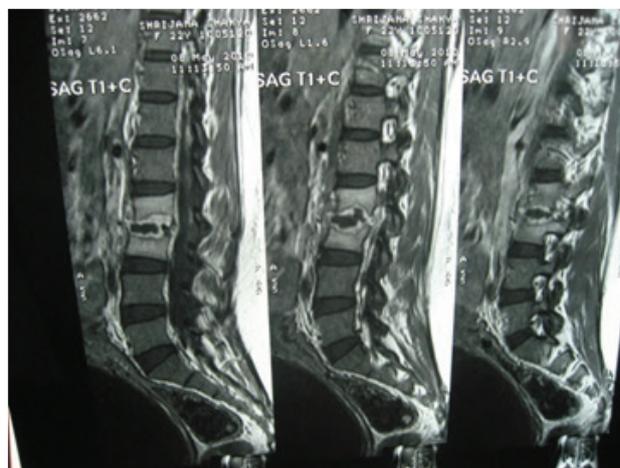


Figure 2: MRI of lumbosacral spine. Lateral View showing destruction and irregularity of end plates at L2, L3 levels.

Discussion

Acute discitis has been reported as a rare complication most commonly following spine surgeries with incidence ranging from 1-2.8%. Although both non-infective and infective aetiologies have been implicated to its causation, persistent discitis is almost always infective.² Reported predisposing factors for infective discitis include depressed immune status such as diabetes mellitus, drug addiction, alcoholism and patients with are on steroid.³ Cases of acute infective discitis have been reported following spinal anesthesia from different types of setup.^{4,5}

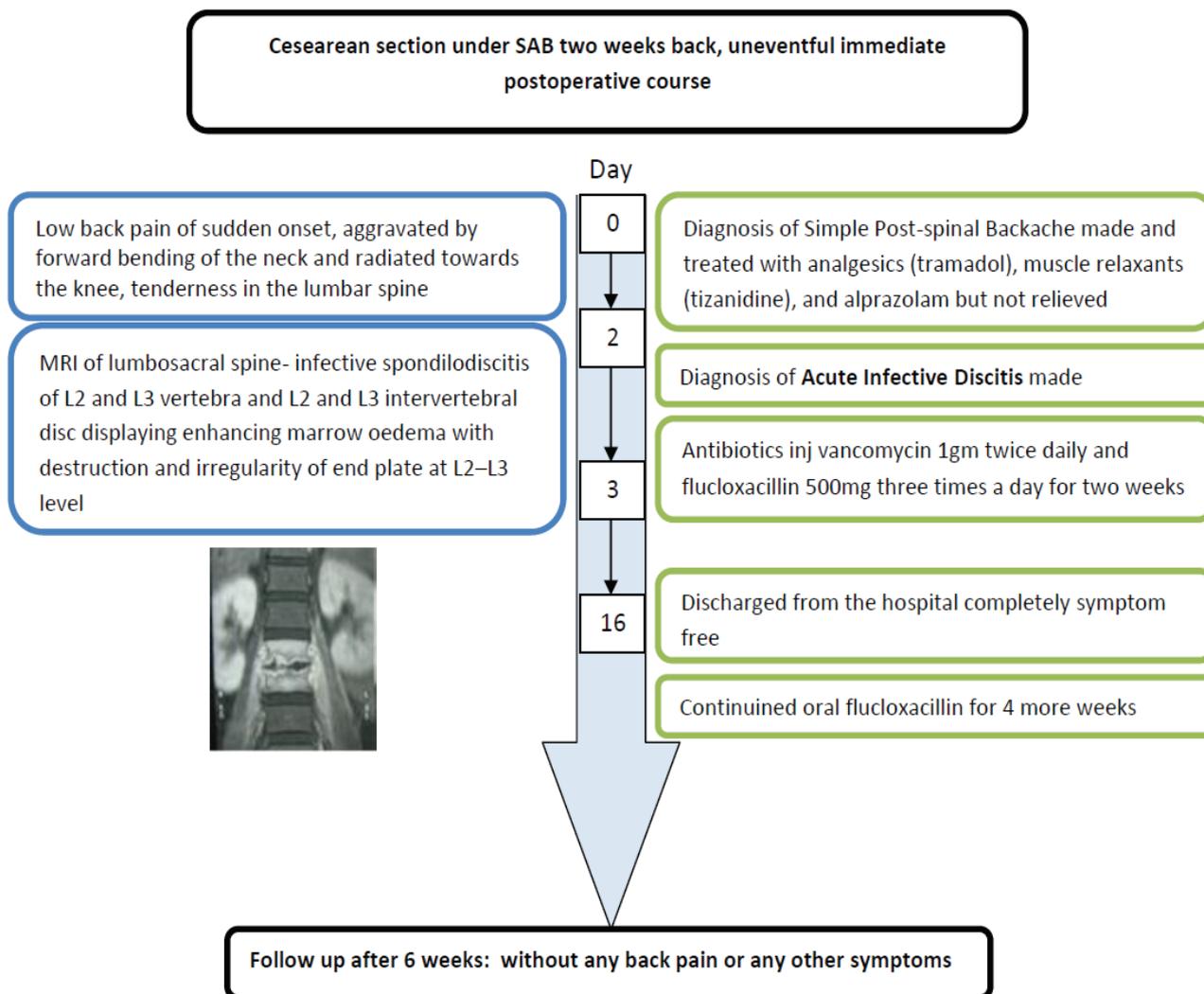


Figure 3: Timeline of events

Diagnosis of acute discitis may be difficult due to its nonspecific presentation and time of presentation varying from less than two weeks to 6 months after the inciting event. The patients with acute discitis may present in any of the four stages- low back pain, root pain, weakness and paralysis.⁵ Our case presented in the early stage of low back pain which helped us in diagnosing the condition early and the patient could be treated before any permanent disability ensued. The back pain due to acute discitis has been described to range from mild discomfort to very severe pain mostly with spasmodic character and sometimes refers to hip and groins.^{7,8} Some patients can even present with vague nonspecific features like anorexia, weight loss and urinary retention. Radicular pain with neurological deficit may be the presenting feature in some cases.

Although a wide variety of gram positive and gram negative bacteria as well as fungi have been attributed to cause spontaneous discitis, staphylococcus aureus⁷ has been found to be the most common causative organism in acute discitis following invasive interventions in the spine.

Suitable diagnostic modality of this condition is magnetic resonance imaging (MRI) or a combination of bone and gallium scan.¹ X-Ray changes are evident only after 2-4 weeks of presentation of the symptoms.⁷ Ideally culture of the infected tissue is the best option for microbiological diagnosis but may not be technically feasible in every setup.

As in our case, most of the patients presenting early respond well to antibiotics and analgesics and surgical intervention are not required. However if left undiagnosed untreated in the early stages, complication like vertebral osteomyelitis, meningitis, epidural/brain abscess⁴, bony deformities with disabling neurological consequences and even death follow. Understandably we were able to diagnose and manage the case because of the early presentation of the case, our tertiary care setup and the availability of diagnostic modalities (MRI). Therefore high degree of suspicion and early referral may be the only ways for many centres if such cases are encountered. Preventing acute infective discitis following spinal anaesthesia warrants proper understanding of its pathophysiology and

adoption of rigorous aseptic techniques. This demands anaesthetic care to be provided by appropriately qualified and trained personnel and enforcement of recommended safety standards in every setup.

Informed consent: An informed consent was obtained from the patient for publication of the report without disclosing her identity.

Conflict of interest: The authors have filled the ICMJE conflict of interest form and have nothing to declare.

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References

1. Chou R, Loeser JD, Owens DK, Rosenquist RW, Atlas SJ, Baisden J, et al. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. *Spine* 2009;34(10):1066-77. <https://doi.org/10.1097/BRS.0b013e3181a1390d> [PMid:19363457]
2. Fraser RD, Osti OL, Vernon-Roberts B. Discitis after discography. *J Bone Joint Surg Br* 1987;69:26-35. [PMid:3818728]
3. Ha KY, Kim YH. Chronic inflammatory granuloma mimics clinical manifestation of lumbar spinal stenosis after acupuncture: a case report. *Spine (Phila Pa 1976)* 2003;28:E217-20. <https://doi.org/10.1097/01.BRS.0000067278.67428.40> [PMid:12782998]
4. Bajwa ZH, Ho C, Grush A, Kleefield J, Warfield CA. Discitis associated with pregnancy and anaesthesia. *Anesth Analg* 2002;94:415-16. [PMid:11812710]
5. Chaudhary P, Shrestha BP, Khanal GP, Maharjan R, Paneru SR, Yadav DK. Discitis after spinal anaesthesia in lower limb surgery in orthopaedics. *Health Renaissance* 2012;10:150-2. <https://doi.org/10.3126/hren.v10i2.6587>
6. Saeed MU, Gottmukkula R, Kennedy DJ. Group G Streptococcus spinal epidural abscess: a case report and review of the literature. *Scand J Infect Dis* 2007;39:1073-5. <https://doi.org/10.1080/00365540701477576> [PMid:17852916]
7. Hopkinson N, Stevenson J, Benjamin S. A case ascertainment study of septic discitis: clinical, microbiological and radiological features. *QJM* 2001;94:465-70. <https://doi.org/10.1093/qjmed/94.9.465> [PMid:11528009]
8. Khan IA, Vaccaro AR, Zlotolow DA. Management of vertebral diskitis and osteomyelitis. *Orthopedics* 1999;22:758-65. [PMid:10465488]